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In re Application of:	)	
	)	
Ghirnikar et al.	)	Examiner: Unknown
	)	
Application No: Not yet assigned	)	Art Unit: Unknown
	)	
Filed: Herewith	)	
	)	
For: Service Level Indication and Registration Processing in a Wireless Communication Device	)	
	)	
This is a continuation of:	)	Examiner: Gary, E
Serial No. 09/089,271	)	
	)	Art Unit: 2744
Filed: June 2, 1998	)	
	)	

PRELIMINARY AMENDMENT AND REMARK

Box Fee Amendment
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above referenced application, the Applicant respectfully requests the Examiner to enter the following amendment and to consider the following remark.

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AMENDMENTS TO SPECIFICATION - CLEAN VERSION

Please amend the Specification as follows:

- *Page 1, please replace the paragraph on lines 4 and 5 with the following:*

This application is a continuation of prior application Serial No. 09/089,271 filed June 2, 1998, the priority of which is hereby claimed.

- *Page 2, please replace the paragraph on lines 3-14 with the following:*

Returning to Figure 1A, the base transmitter 111 is typically mounted to a tower that is 120 to 800 feet high and is significantly more powerful than the transmitter of the wireless communication device 120, which is typically located approximately 3 feet from the ground. Consequently, the distance at which reliable message exchange can take place from the base transmitter 111 to the wireless communication device 120, labeled R1, is much greater than the distance at which reliable message exchange can take place from the wireless communication device 120 to the base receiver 112, labeled R2. Therefore, one of the many challenges faced by designers of communications systems and wireless communication devices is how to resolve the imbalance in bit-error rates between the forward channel (i.e., the path from the network 110 to the wireless communication device 120) and the reverse channel (i.e., the path from the wireless communication device 120 to the network 110).

- *Page 11, please replace the paragraph on lines 3-15 with the following:*

Figure 4 is a logical view illustrating various functional units provided in the wireless communication device 120 according to one embodiment of the present invention. Forward channel monitoring logic 440 receives signals from the forward

channel and generates a status for use by service quality monitoring logic 410 and state machine logic 400. Exemplary status values may include representations of the following: (1) No signal, (2) synchronization error, (3) frame error, (4) good frame, (5) reverse channel acknowledgment (ACK), (6) Messaging system ping, and (7) failed message from the wireless communication device to the messaging system. Of course, more or less status values may be used in different embodiments. For example, in one embodiment, the frame error status may be further broken down into two states, one representing a frame error at a low channel speed and another representing a frame error at a high channel speed. Further, other embodiments may distinguish between good frames that are filled and good idle frames. In any event, the forward channel monitoring logic 440, in a known manner, interprets signals received over the forward channel and produces a status for each frame.

AMENDMENTS TO SPECIFICATION - MARKED UP VERSION

Please amend the Specification as follows:

• *Page 1, please replace the paragraph on lines 4 and 5 with the following:*

[This application claims the benefit of U.S. Provisional Application No. 60/060,416 filed September 30, 1997.] This application is a continuation of prior application Serial No. 09/089,271 filed June 2, 1998, the priority of which is hereby claimed.

• *Page 2, please replace the paragraph on lines 3-14 with the following:*

Returning to Figure 1A, the base transmitter 111 is typically mounted to a tower that is 120 to 800 feet high and is significantly more powerful than the transmitter of the wireless communication device 120, which [it] is typically located approximately 3 feet from the ground. Consequently, the distance at which reliable message exchange can take place from the base transmitter 111 to the wireless communication device 120, labeled R1, is much greater than the distance at which reliable message exchange can take place from the wireless communication device 120 to the base receiver 112, labeled R2. Therefore, one of the many challenges faced by designers of communications systems and wireless communication devices is how to resolve the imbalance in bit-error rates between the forward channel (i.e., the path from the network 110 to the wireless communication device 120) and the reverse channel (i.e., the path from the wireless communication device 120 to the network 110).

• *Page 11, please replace the paragraph on lines 3-15 with the following:*

Figure 4 is a logical view illustrating various functional units provided in the wireless communication device [160] 120 according to one embodiment of the present

invention. Forward channel monitoring logic 440 receives signals from the forward channel and generates a status for use by service quality monitoring logic 410 and state machine logic 400. Exemplary status values may include representations of the following: (1) No signal, (2) synchronization error, (3) frame error, (4) good frame, (5) reverse channel acknowledgment (ACK), (6) Messaging system ping, and (7) failed message from the wireless communication device to the messaging system. Of course, more or less status values may be used in different embodiments. For example, in one embodiment, the frame error status may be further broken down into two states, one representing a frame error at a low channel speed and another representing a frame error at a high channel speed. Further, other embodiments may distinguish between good frames that are filled and good idle frames. In any event, the forward channel monitoring logic 440, in a known manner, interprets signals received over the forward channel and produces a status for each frame.

AMENDMENTS TO CLAIMS -- CLEAN VERSION

For the Examiner's convenience all pending claims are presented herein. Those claims that remain unchanged by this amendment are prefixed with "(Unchanged)".

1.   (Once amended) A method of determining the current service level of a wireless communication device, the method comprising:

providing at least three distinct levels of service including a storing service mode, a basic service mode, and a full service mode;

distinguishing between the storing service mode and the basic service mode based upon one or more characteristics of a forward channel from a messaging system to the wireless communication device; and

distinguishing between the basic service mode and the full service mode based upon one or more characteristics of a reverse channel from the wireless communication device to the messaging system.

2.   (Once amended) The method of claim 1, wherein new messages destined for the wireless communication device are stored by the messaging system while the wireless communication device is providing the storing service mode.

3.   (Once amended) The method of claim 2, wherein new messages destined for the wireless communication device are transmitted to the wireless communication device by the messaging system and stored messages that remain undelivered as a result of the wireless communication device providing the storing service mode remain undelivered while the wireless communication device is providing the basic service mode.

1   4.   (Once amended) The method of claim 3, wherein both new messages and stored

2   messages are transmitted to the wireless communication device by the messaging

3   system while the wireless communication device is providing the full service

4   mode.

1   5.   (Unchanged) The method of claim 1, wherein the one or more characteristics of

2   the forward channel includes the forward channel's signal quality.

1   6.   (Once amended) The method of claim 5 further including generating a signal

2   quality metric representative of the forward channel's signal quality over a

3   predetermined period of time.

1   7.   (Once amended) The method of claim 1, wherein the one or more characteristics

2   of the forward channel includes a status.

1   8.   (Once amended) The method of claim 7, wherein the status represents a value

2   from one of a plurality of states, the method further including associating each of

3   the plurality of states with a weight.

1   9.   (Once amended) The method of claim 8, wherein the plurality of states includes:

2   no signal;

3   synchronization error;

4   frame error; and

5   good frame.

1   10.   (Once amended) The method of claim 8 further including generating a signal

2   quality metric representative of the forward channel's signal quality over a

3   predetermined period of time based upon weighted values of the status over the

4   predetermined period of time.

1   11.   (Unchanged) The method of claim 1, wherein verification of the reverse channel

2   is achieved upon receipt of an acknowledgment from the messaging system on the

3   forward channel corresponding to a message transmitted to the messaging system

4   on the reverse channel.

1   12.   (Once amended) A method of transitioning between service modes and indicating

2   a current service mode to a user of a wireless communication device, the method

3   comprising:

4   determining a status of a signal associated with a forward channel from a

5   messaging system to the wireless communication device;

6   determining a quality metric based upon the status over a predetermined period of

7   time;

8   providing at least a full service mode, a basic service mode, and a storing service

9   mode;

10   if the current service mode is the storing service mode, transitioning to the basic

11   service mode after determining the quality metric is better than a first

12   predetermined threshold;

13   if the current service mode is the basic service mode, transitioning to the full

14   service mode after verification of a reverse channel from the wireless

15   communication device to the messaging system; and

16   if the current service mode is the full service mode, transitioning to the basic

17   service mode after determining the reverse channel has become degraded.

1   13.   (Once amended) The method of claim 12 further comprising providing an

2   indication of the current service mode to the user.

1   14.   (Once amended) The method of claim 12 further comprising:

2   determining an initial value for the current service mode by:

3   inspecting the signal for synchronization information,

4   initializing the current service mode to the storing service mode if no

5   synchronization information is found, and

6   initializing the current service mode to the basic service mode if

7   synchronization information is found.

1   15.   (Once amended) The method of claim 12 further comprising:

2   in the basic service mode, transitioning to the storing service mode after the status

3   indicates the wireless communication device is out of range;

4   in the full service mode, transitioning to the basic service mode after determining

5   the quality metric is worse than a second predetermined threshold; and

6   in the full service mode, transitioning to the storing service mode after the status

7   indicates the wireless communication device is out of range.

1   16.   (Once amended) The method of claim 12, wherein the storing service mode

2   includes a first storing state and a second storing state, and wherein the basic

3   service mode includes a first basic state, a second basic state, and a third basic

4   state, the method further comprising:

5   in the first storing state, re-initializing a service quality monitoring process after

6   the status indicates a good frame has been detected on the forward

7   channel;

8   in the second storing state, beginning a registration process after the status

9   indicates a ping has been received from the messaging system on the

10   forward channel;

11   in the first basic state, transitioning to the second basic state after determining the

12   quality metric is better than a third predetermined threshold;

13   in the second basic state, transitioning to the third basic state after determining the

14   quality metric is worse than the second predetermined threshold; and

15   in the third basic state, transitioning to the second basic state after determining the

16   quality metric is better than the third predetermined threshold.

1   17.   (Unchanged) The method of claim 16, wherein the first, second, and third

2   predetermined thresholds are programmable parameters.

1   18.   (Unchanged) The method of claim 12, wherein new messages destined for the

2   wireless communication device are not received by the wireless communication

3   device while the wireless communication device is in the storing service mode,

4   wherein new messages destined for the wireless communication device are

5   received by the wireless communication device and stored messages that remain

6   undelivered as a result of the wireless communication device having been in the

7   storing service mode remain undelivered while the wireless communication

8   device is in the basic service mode, and wherein both new messages and stored

9   messages are received by the wireless communication device while the wireless

10   communication device is in the full service mode.

1   19.   (Once amended) The method of claim 12 further including determining whether

2   or not to attempt registering with the messaging system based upon the current

3   service mode.

1   20.   (Once amended) The method of claim 12 further including periodically

2   evaluating the quality metric.

1   21.   (Once amended) A method of registering a wireless communication device with a

2   messaging system, the method comprising:

3   providing a current service mode in one of a plurality of states including:

4   a storing service mode in which new messages destined for the wireless

5   communication device are not received by the wireless

6   communication device,

7   a basic service mode in which new messages destined for the wireless

8   communication device are received by the wireless communication

9   device and stored messages that remain undelivered as a result of

10   the wireless communication device having been in the storing

11   service mode remain undelivered while the wireless

12   communication device is in the basic service mode, and

13   a full service mode in which both new messages and stored messages are

14   received by the wireless communication device while the wireless

15   communication device is in the full service mode;

16   a registration process determining what action to take based upon the current

17   service mode.

1   22.   (Once amended) The method of claim 21 further including:

2   the registration process transmitting one or more registration messages to the

3   messaging system during the basic service mode; and

4   the registration process transmitting no registration messages to the messaging

5   system during the full service mode and the storing service mode.

1   23.   (Once amended) The method of claim 21 further including:

2   determining a status of a signal associated with a forward channel from a

3   messaging system to the wireless communication device;

4   determining a quality metric based upon the status over a predetermined period of

5   time;

6   if the current service mode is the storing service mode, transitioning to the basic

7   service mode after determining the quality metric is better than a first

8   predetermined threshold;

9   if the current service mode is the basic service mode, transitioning to the full

10   service mode after verification of a reverse channel from the wireless

11   communication device to the messaging system; and

12 if the current service mode is the full service mode, transitioning to the basic

13   service mode after determining the reverse channel has become degraded.

1 24. (Once amended) The method of claim 23 further including:

2 determining an initial value for the current service mode by

3   inspecting the signal for synchronization information,

4   initializing the current service mode to the storing service mode if no

5   synchronization information is found, and

6   initializing the current service mode to the basic service mode if

7   synchronization information is found.

1 25. (Once amended) The method of claim 23 further including:

2 in the basic service mode, transitioning to the storing service mode after the status

3   indicates the wireless communication device is out of range;

4 in the full service mode, transitioning to the basic service mode after determining

5   the quality metric is worse than a second predetermined threshold; and

6 in the full service mode, transitioning to the storing service mode after the status

7   indicates the wireless communication device is out of range.

1 26. (Unchanged) A wireless communication device comprising:

2 a storage device having stored therein a service mode determination routine for

3   providing a plurality of service modes including a full service mode, a

4   basic service mode and a storing service mode;

5 a processor coupled to the storage device to execute the service mode

6   determination routine to evaluate a quality metric associated with a

7   forward channel from a messaging system and identify a current service

8   mode from the plurality of service modes, where:

9   the quality metric is generated based upon a status of a signal associated

10   with the forward channel;

11   the current service mode is updated to the basic service mode from the

12   storing service mode if the quality metric is better than a first

13   predetermined threshold;

14   the current service mode is updated to the full service mode from the basic

15   service mode after verifying a reverse channel from the wireless

16   communication device to the messaging system;

17   the current service mode is updated to the basic service mode from the full

18   service mode after determining the reverse channel has become

19   degraded.

1   27.   (Unchanged) The wireless communication device of claim 26, wherein new

2   messages destined for the wireless communication device are not received by the

3   wireless communication device while the wireless communication device is in the

4   storing service mode, wherein new messages destined for the wireless

5   communication device are received by the wireless communication device and

6   stored messages that remain undelivered as a result of the wireless

7   communication device having been in the storing service mode remain

8   undelivered while the wireless communication device is in the basic service

9   mode, and wherein both new messages and stored messages are received by the

10   wireless communication device while the wireless communication device is in the

11   full service mode.

1   28.   (Unchanged) The wireless communication device of claim 27 wherein:

2   the current service mode is updated to the storing service mode from the basic

3   service mode after the status indicates the wireless communication device

4   is out of range;

5   the current service mode is updated to the basic service mode from the full service

6   mode after determining the quality metric is worse than a second

7   predetermined threshold; and

8   the current service mode is updated to the storing service from the full service

9   mode after the status indicates the wireless communication device is out of

10   range.

1   29.   (Unchanged) A wireless communication device comprising:

2   a storage device having stored therein a registration routine that determines

3   registration processing based upon a current service mode;

4   a processor coupled to the storage device to execute the registration routine to

5   transmit zero or more registration messages to a messaging system based

6   upon the current service mode, where:

7   a storing service mode is provided in which new messages destined for the

8   wireless communication device are not received by the wireless

9   communication device;

10   a basic service mode is provided in which new messages destined for the

11   wireless communication device are received by the wireless

12   communication device and stored messages that remain

13   undelivered as a result of the wireless communication device

14   having been in the storing service mode remain undelivered while

15   the wireless communication device is in the basic service mode;

16   a full service mode is provided in which both new messages and stored

17   messages are received by the wireless communication device;

18   one or more registration messages are transmitted to the messaging system

19   while the current service mode is the basic service mode; and

20   no registration messages are transmitted to the messaging system while the

21   current service mode is the full service mode or the storing service

22   mode.

1   30.   (New) A method comprising:

2   determining a status of a forward channel signal from a messaging system to a

3   wireless communication device;

4   determining a quality metric based upon the status of the forward channel signal

5   over a predetermined period of time;

6   providing at least a full service mode, a basic service mode, and a storing service

7   mode, wherein:

8   the storing service mode comprises at least a first storing state and a

9   second storing state, and

10   the basic service mode comprises at least a first basic state, a second basic

11   state, and a third basic state;

12   if the current service mode is the storing service mode, transitioning to the basic

13   service mode after determining the quality metric is better than a first

14   predetermined threshold;

15   if the current service mode is the basic service mode, transitioning to the full

16   service mode after verification of a reverse channel from the wireless

17   communication device to the messaging system; and

18   if the current service mode is the full service mode, transitioning to the basic

19   service mode after determining the reverse channel has become degraded

20   or if the quality metric is worse than a second predetermined threshold.

1   31.   (New) The method of claim 30, wherein the first basic state is a state in which the

2   wireless communication device is barely in range, the second basic state is a state

3   in which in which the forward channel signal is of good quality and the reverse

4   channel is not verified, and the third basic state is a state in which the forward

5   channel reception is breaking up.

1   32.   (New) The method of claim 30, wherein the first storing state is a state in which

2   the wireless communication device is out of range and the second storing state is a

3   state in which the wireless communication device is almost out of range.

1   33.   (New) The method of claim 30, further comprising transitioning to the first

2   storing state from any other mode after receiving an out of range status from a

3   forward channel monitoring logic.

1 34. (New) The method of claim 30, further comprising transitioning from the first

2 basic state to the second basic state if the quality metric is better than a third

3 predetermined threshold.

1 35. (New) The method of claim 34, further comprising transitioning from the first

2 basic state or the third basic state to the second storing state if the quality metric is

3 worse than a fourth predetermined threshold.

1 36. (New) The method of claim 30, further comprising transitioning from the second

2 basic state to the third basic state if the quality metric is worse than the second

3 predetermined threshold.

1 37. (New) The method of claim 30, wherein the first basic state is the initial state on

2 reset if a synchronization signal is found on the forward channel.

1 38. (New) The method of claim 30, wherein the first storing state is the initial state

2 on reset if a synchronization signal is not found on the forward channel.

AMENDMENTS TO CLAIMS -- MARKED UP VERSION

Please amend the claims as follows:

1.   1.   (Once amended) A method of determining the current service level of a wireless

2   communication device, the method comprising [the steps of]:

3   providing at least three distinct levels of service including a [first level of service]

4   storing service mode, a [second level of service] basic service mode, and a

5   [third level of service] full service mode;

6   distinguishing between the [first service level] storing service mode and the

7   [second service level] basic service mode based upon one or more

8   characteristics of a forward channel from a messaging system to the

9   wireless communication device; and

10   distinguishing between the [second service level] basic service mode and the

11   [third service level] full service mode based upon one or more

12   characteristics of a reverse channel from the wireless communication

13   device to the messaging system.

1   2.   (Once amended) The method of claim 1, wherein new messages destined for the

2   wireless communication device are stored by the messaging system while the

3   wireless communication device is providing the [first level of service] storing

4   service mode.

1   3.   (Once amended) The method of claim 2, wherein new messages destined for the

2   wireless communication device are transmitted to the wireless communication

3   device by the messaging system and stored messages that remain undelivered as a

4   result of <u>the wireless communication device providing</u> the [first level of service]

5   <u>storing service mode</u> remain undelivered while the wireless communication

6   device is providing the [second level of service] <u>basic service mode</u>.

1   4.   (Once amended) The method of claim 3, wherein both new messages and stored

2   messages are transmitted to the wireless communication device by the messaging

3   system while the wireless communication device is providing the [third level of

4   service] <u>full service mode</u>.

1   5.   (Once amended) The method of claim 1, wherein the one or more characteristics

2   <u>of the forward channel</u> includes the forward channel's signal quality.

1   6.   (Once amended) The method of claim 5 further including [the step of] generating

2   a signal quality metric representative of the forward channel's signal quality over

3   a predetermined period of time.

1   7.   (Once amended) The method of claim 1, wherein the one or more characteristics

2   <u>of the forward channel</u> includes a status.

1   8.   (Once amended) The method of claim 7, wherein the status represents a value

2   from one of a plurality of states, the method further including [the step of]

3   associating each of the plurality of states with a weight.

1   9.   (Once amended) The method of claim 8, wherein the plurality of states [include]

2   <u>includes</u>:

3   no signal;

4   synchronization error;

5   frame error; and

6   good frame.

1   10.   (Once amended) The method of claim 8 further including [the step of] generating

2   a signal quality metric representative of the forward channel's signal quality over

3   a predetermined period of time based upon weighted values of the status over the

4   predetermined period of time.

1   12.   (Once amended) A method of transitioning between service modes and indicating

2   a current service mode to a user of a wireless communication device, the method

3   comprising [the steps of]:

4   determining a status of a signal associated with a forward channel from a

5   messaging system to the wireless communication device;

6   determining a quality metric based upon the status over a predetermined period of

7   time;

8   providing at least a full service mode, a basic service mode, and a storing service

9   mode;

10   if the current service mode is the storing service mode, transitioning to the basic

11   service mode after determining the quality metric is better than a first

12   predetermined threshold;

13   if the current service mode is the basic service mode, transitioning to the full

14   service mode after verification of a reverse channel from the wireless

15   communication device to the messaging system; and

16   if the current service mode is the full service mode, transitioning to the basic

17   service mode after determining the reverse channel has become degraded.

1   13.   (Once amended) The method of claim 12 further comprising [the step of]

2   providing an indication of the current service mode to the user.

1   14.   (Once amended) The method of claim 12 further [including the steps of]

2   comprising:

3   determining an initial value for the current service mode by:

4   inspecting the signal for synchronization information,

5   initializing the current service mode to the storing service mode if no

6   synchronization information is found, and

7   initializing the current service mode to the basic service mode if

8   synchronization information is found.

1   15.   (Once amended) The method of claim 12 further [including the steps of]

2   comprising:

3   in the basic service mode, transitioning to the storing service mode after the status

4   indicates the wireless communication device is out of range;

5   in the full service mode, transitioning to the basic service mode after determining

6   the quality metric is worse than a second predetermined threshold; and

7   in the full service mode, transitioning to the storing service mode after the status

8   indicates the wireless communication device is out of range.

1   16.   (Once amended) The method of claim 12, wherein the storing service mode

2   includes a first storing state and a second storing state, and wherein the basic

3   service mode includes a first basic state, a second basic state, and a third basic

4   state, the method further [including the steps of] comprising:

5   in the first storing state, re-initializing a service quality monitoring process after

6   the status indicates a good frame has been detected on the forward

7   channel;

8   in the second storing state, beginning a registration process after the status

9   indicates a ping has been received from the messaging system on the

10   forward channel;

11   in the first basic state, transitioning to the second basic state after determining the

12   quality metric is better than a third predetermined threshold;

13   in the second basic state, transitioning to the third basic state after determining the

14   quality metric is worse than the second predetermined threshold; and

15   in the third basic state, transitioning to the second basic state after determining the

16   quality metric is better than the third predetermined threshold.

1   19.   (Once amended) The method of claim 12 further including [the step of]

2   determining whether or not to attempt registering with the messaging system

3   based upon the current service mode.

1   20.   (Once amended) The method of claim 12 further including [the step of]

2   periodically evaluating the quality metric.

1   21.   (Once amended) A method of registering a wireless communication device with a

2   messaging system, the method comprising [the steps of]:

3   providing a current service mode in one of a plurality of states including:

4   a storing service mode in which new messages destined for the wireless

5   communication device are not received by the wireless

6   communication device,

7   a basic service mode in which new messages destined for the wireless

8   communication device are received by the wireless communication

9   device and stored messages that remain undelivered as a result of

10   the wireless communication device having been in the storing

11   service mode remain undelivered while the wireless

12   communication device is in the basic service mode, and

13   a full service mode in which both new messages and stored messages are

14   received by the wireless communication device while the wireless

15   communication device is in the full service mode;

16   a registration process determining what action to take based upon the current

17   service mode.

1   22.   (Once amended) The method of claim 21 further including [the steps of]:

2   the registration process transmitting one or more registration messages to the

3   messaging system during the basic service mode; and

4   the registration process transmitting no registration messages to the messaging

5   system during the full service mode and the storing service mode.

1   23.   (Once amended) The method of claim 21 further including [the steps of]:

2   determining a status of a signal associated with a forward channel from a

3   messaging system to the wireless communication device;

4   determining a quality metric based upon the status over a predetermined period of

5   time;

6   if the current service mode is the storing service mode, transitioning to the basic

7   service mode after determining the quality metric is better than a first

8   predetermined threshold;

9   if the current service mode is the basic service mode, transitioning to the full

10   service mode after verification of a reverse channel from the wireless

11   communication device to the messaging system; and

12   if the current service mode is the full service mode, transitioning to the basic

13   service mode after determining the reverse channel has become degraded.

1   24.   (Once amended) The method of claim 23 further including [the steps of]:

2   determining an initial value for the current service mode by

3   inspecting the signal for synchronization information,

4   initializing the current service mode to the storing service mode if no

5   synchronization information is found, and

6   initializing the current service mode to the basic service mode if

7   synchronization information is found.

1 25. (Once amended) The method of claim 23 further including [the steps of]:

2   in the basic service mode, transitioning to the storing service mode after the status

3   indicates the wireless communication device is out of range;

4   in the full service mode, transitioning to the basic service mode after determining

5   the quality metric is worse than a second predetermined threshold; and

6   in the full service mode, transitioning to the storing service mode after the status

7   indicates the wireless communication device is out of range.

Please add the following claims:

1 30. (New) --A method comprising:

2   determining a status of a forward channel signal from a messaging system to a

3   wireless communication device;

4   determining a quality metric based upon the status of the forward channel signal

5   over a predetermined period of time;

6   providing at least a full service mode, a basic service mode, and a storing service

7   mode, wherein:

8   the storing service mode comprises at least a first storing state and a

9   second storing state, and

10   the basic service mode comprises at least a first basic state, a second basic

11   state, and a third basic state;

12   if the current service mode is the storing service mode, transitioning to the basic

13   service mode after determining the quality metric is better than a first

14   predetermined threshold;

15	if the current service mode is the basic service mode, transitioning to the full
16	service mode after verification of a reverse channel from the wireless
17	communication device to the messaging system; and
18	if the current service mode is the full service mode, transitioning to the basic
19	service mode after determining the reverse channel has become degraded
20	or if the quality metric is worse than a second predetermined threshold.--

1   31.   (New) --The method of claim 30, wherein the first basic state is a state in which

2   the wireless communication device is barely in range, the second basic state is a

3   state in which in which the forward channel signal is of good quality and the

4   reverse channel is not verified, and the third basic state is a state in which the

5   forward channel reception is breaking up.--

1   32.   (New) --The method of claim 30, wherein the first storing state is a state in which

2   the wireless communication device is out of range and the second storing state is a

3   state in which the wireless communication device is almost out of range.--

1   33.   (New) --The method of claim 30, further comprising transitioning to the first

2   storing state from any other state after receiving an out of range status from a

3   forward channel monitoring logic.--

1   34.   (New) --The method of claim 30, further comprising transitioning from the first

2   basic state to the second basic state if the quality metric is better than a third

3   predetermined threshold.--

1　35.　(New) --The method of claim 34, further comprising transitioning from the first

2　　　　basic state or the third basic state to the second storing state if the quality metric is

3　　　　worse than a fourth predetermined threshold.--

1　36.　(New) --The method of claim 30, further comprising transitioning from the

2　　　　second basic state to the third basic state if the quality metric is worse than the

3　　　　second predetermined threshold.--

1　37.　(New) --The method of claim 30, wherein the first basic state is the initial state

2　　　　on reset if a synchronization signal is found on the forward channel.--

1　38.　(New) --The method of claim 30, wherein the first storing state is the initial state

2　　　　on reset if a synchronization signal is not found on the forward channel.--

REMARK

The present application is being filed as a continuation of application Serial

Number 09/089,271, filed June 2, 1998, ("the parent application") pursuant to 37 C.F.R.

§ 1.53 (b), which is entitled to the benefit of U.S. Provisional Application No.

60/060,416, filed September 30, 1997. The Applicant respectfully requests consideration

of the present application as amended herein.

Claims 1-10, 12-16, and 19-25 have been amended. No claims have been

cancelled. Claims 30-38 have been added. Therefore, claims 1-38 are present for

examination.

35 U.S.C. §103 Rejection

Skytel in view of Bartle et al.

In the parent application, the Examiner rejected Claims 1-7 and 11-13, 18-20, 23,

and 26-27 under 35 U.S.C. §103 (a) as being unpatentable over Skytel, "Sky Word Plus -

Store and Deliver Paging", product literature #1 ("Skytel #1") in view of U.S. Patent No.

5,732,347 of Bartle et al. ("Bartle"). Further, the Examiner rejected claim 21 under 35

U.S.C. §103 (a) as being unpatentable over Skytel.

Skytel #1 -- The Applicant hereby submits that Skytel #1 is derived from the

invention described in the present application and that Skytel #1 thus is not effective prior

art under 35 U.S.C. §103 (a). In this regard, declarations prepared pursuant to the

requirements of CFR §1.132 are enclosed herewith. The declarations are signed by

inventors Avinash L. Ghirnikar and Paul J. Lima and are accompanied by Exhibits A and

B, which comprise the Skytel reference. (The current whereabouts of the other inventors,

Gregory J. Pinter and Carl Edward Lippett, were not discovered with reasonable diligence.)

The provisions of the declarations demonstrate that both the Skytel #1 reference and Skytel, "Sky Word Plus - Get Skytel. Get the Message." ("Skytel #2") are derived from the Applicant and that the Skytel #1 and Skytel #2 references describe the invention that was invented by the Applicant and that is the subject matter of the current application. Within the Skytel references, there is no contrary claim of inventorship on behalf of any party. For these and other reasons, Skytel #1 and Skytel #2 are not effective prior art in this application under the provisions of 35 U.S.C. §103 (a).

It is submitted that, although the Skytel references are attributable to the Applicant, Skytel #1 also would not be effective prior art under 35 U.S.C. § 102 (a). The Skytel #1 contains a notation of "04-97". Even if it were presumed that the material was released publicly on such a date, the date is within one year of the filing date of U.S. Provisional Application No. 60/060,416 on September 30, 1997. For this reason and other reasons, Skytel #1 is not effective prior art in this application under 35 U.S.C. §102 (a).

Bartle -- Regarding the remaining reference cited is Bartle, which discusses a method and apparatus for notifying the user of a digital cellular telephone regarding an imminent digital communication disconnection. (Bartle, col. 2, lines 3-6) Among other differences, **Claim 1** of the present application, as amended, provides for a *storing service mode*, a *basic service mode*, and a *full service mode* for a communication device. Bartle does not teach or suggest such service modes. In addition to numerous other

differences, Bartle does not discuss a wireless communication service that distinguishes between a *basic service* mode of operation and a *full service* mode of operation.

Bartle discusses the disconnection of a digital cellular phone under certain circumstances and transitions of a cellular telephone between different types of communications systems or between different communication cells. (e.g., Bartle, col. 2, line 35 to col. 3, line 6). Further, Bartle discusses transitions from personal communication systems and wireless private branch exchange systems to public cellular providers. (Bartle, col. 1, lines 48-64) However, none of the transitions and system hand-offs addressed in Bartle teach or suggest the modes of operation contained in Claim 1 of the present application.

Other Independent Claims -- The arguments regarding Claim 1 above also apply to the remaining rejected independent claims, **Claims 12, 21, and 26**. For these and other reasons, it is submitted that that such claims are allowable.

Dependent Claims -- The remaining rejected claims are dependent on claims 1, 12, 21, or 25 and, while also having distinguishing features over the prior art, such claims are allowable as being dependent on the allowable base claims.

Conclusion

Applicants respectfully submit that the prior rejections in the parent application have been overcome by amendment and by the remark set forth herein, and that the claims are now in condition for allowance. Accordingly, Applicant respectfully requests that the claims in the present application be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

The Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 4/18/01

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